

**Notice of Allowability**

Application No.

09/869,371

Examiner

Zandra V. Smith

Applicant(s)

HAGLER, THOMAS W.

Art Unit

2877

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 20 February 2004 and Terminal Disclaimer filed 13 September 2004.
2. ☒ The allowed claim(s) is/are 102-126, 130 and 131.
3. ☒ The drawings filed on 27 January 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 04-06-04
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

**DETAILED ACTION*****Allowable Subject Matter***

Claims 102-126 and 130-131 are allowed.

The following is an examiner's statement of reasons for allowance: the prior art of record, taken alone or in combination, fails to disclose or render obvious, a system for analyzing radiation from an extended source that includes a two dimensional spatial radiation modulator rotated about a rotation axis and positioned in an encoding plane so that said encoding axis is along a radial axis, said modulator having at least two radiation filters located at different radii from said rotation axis, said filters occupying distinct annular regions and modulating the intensities of corresponding spatial components with different modulation functions, to provide an encoded beam comprising at least two encoded spatial component as said modulator is rotated about said rotation axis, in combination with the rest of the limitations of claims 102, 104.

As to claims 106, 111, 115, and 123, the prior art of record, taken alone or in combination, fails to disclose or render obvious a radiation spectrum analyzer that includes a two-dimensional spatial radiation modulator rotated about a rotation axis and positioned in an encoding plane so that said encoding axis is substantially along a radial axis, said modulator having at least one radiation filter pair to provide an encoded beam as said modulator is rotated about said rotation axis, said pair comprising two radiation filters located at different radii from said rotation axis for modulating the intensities of corresponding radiation components, said filters having modulation functions that are complementary to each other, to provide a single encoded component, each of said encoded components having an amplitude and phase which is

Art Unit: 2877

determined by the relative intensity of said corresponding radiation components, in combination with the rest of the limitations of the claims.

Regarding claim 115, the prior art of record, taken alone or in combination, fails to disclose or render obvious a system for analyzing radiation that includes positioning a two-dimensional spatial radiation modulator in an encoding plane and rotating the modulator about a rotation axis so that said encoding axis is substantially along a radial axis, said modulator having at least one radiation filter at a radius from said rotation axis, said filter modulating the intensity of a corresponding radiation component to provide an encoded beam comprising at least one encoded component and analyzing signals generated by said detector, said analyzing including subtracting the detector output from an expected detector output as a function of the rotation angle of said modulator about said rotation axis to provide an output difference function, said analyzing further comprising analyzing said output difference function to detect sub-rotational period transients in the amplitude of one or more encoded components, in combination with the rest of the limitations of the claim.

As to claim 130, the prior art of record, taken alone or in combination, fails to disclose or render obvious a two-dimensional spatial radiation modulator adapted to be rotated about a rotation axis to modulate at least two components of an incident radiation beam to encode said beam as said substrate is rotated about said rotation axis, said modulator comprising a substrate and at least one radiation filter pair, said pair comprising two radiation filters located at different radii from said rotation axis for modulating the intensities of corresponding radiation components, said filters having modulation functions that are complementary to each other to provide a single encoded component, in combination with the rest of the limitations of the claim.

Art Unit: 2877

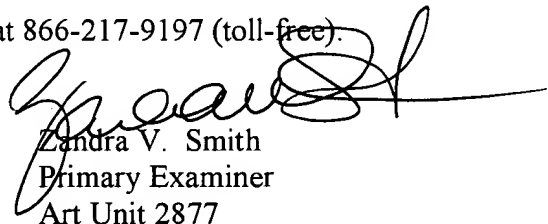
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Fax/Telephone Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zandra V. Smith whose telephone number is (571) 272-2429. The examiner can normally be reached on 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley Jr. can be reached on (571) 272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Zandra V. Smith  
Primary Examiner  
Art Unit 2877

September 30, 2004